Space for Africa

Stefano Scarda
European Commission
DG Enterprise and Industry

Brussels, 13 September 2012
International cooperation and the European Space Policy

Programmes
Policies
space industry competitiveness

Environment, Climate change, Sustainable development, Education, Access to knowledge, Humanitarian aid, ...

POLICY COHERENCE
The evolving Africa-EU relations

I. Africa-EU Summit, Cairo

- 2000: Launch NEPAD
- 2001: Establishment African Union
- 2002: Cotonou agreement
- 2003: Partnership between ACP countries and EC MS

II. Africa-EU Summit, Lisbon: Adoption of the Africa-EU Strategic Partnership

- 2004: Adoption EU Strategy for Africa
- 2005: EU enlargement
- 2006: Implementation instit. architecture Africa-EU Partnership
- 2007: Mid-term review

III. Africa-EU Summit, Libya
Addressing Africa as one

- Euro-Mediterranean Partnership with North Africa
- Neighbourhood Policy
- Cotonou Agreement with sub-Saharan Africa
- Agreement on Trade, Development and Cooperation with South Africa
Eight thematic Africa-EU partnerships

1. Peace & Security
2. Democratic Governance and Human Rights
3. Trade, Regional integration & Infrastructure
4. MDGs
5. Energy
6. Climate Change
7. Migration, Mobility & Employment
8. Science, Information Society & Space

"8th Africa-EU Partnership on Science, Information Society and Space"

"3rd Africa-EU Partnership on Trade, Regional Integration and Infrastructure"

Environment, resource management, climate change, peace and security, transport
Joint Africa-EU initiatives on space

- GMES-Africa
- EGNOS-Africa

- Discussions to support the creation of the African Space Agency
- Space Sciences Institute of the pan-African University

Dialogue between the European Commission and the African Union Commission (Collège-to-Collège)
GMES-Africa

- Action plan prepared
- Validation by stakeholders through thematic workshops

- Maritime and coastal area (Kenya)
- Monitoring of natural resources (Egypt)
- Water management (Nigeria)

- Coordination committee: EC + AUC + RECs + MS
- On-going projects
  - MESA (post-AMESD)
  - FP7
EGNOS as part of a worldwide SBAS coverage system

Source: Stanford University
Aviation

Benefits for passengers, airports, airlines and the environment

**Use**

- Instrumental vertical guidance, reduces accident probability

- Route optimisation with the use of ADS-B *(Automatic Dependent Surveillance-Broadcast)*

- Phasing out of current ground-based equipment for aid to navigation

- Reduction of *decision height* during landing

**Impact**

- Safer landing, fewer accidents

- Fuels savings, CO₂ emissions reduction

- Costs reduction for airports

- Less delays, diversions and cancellations
Case study: Congo river basin

EGNOS can support navigation and dredging vessels operations through the ‘shallow’ areas, allowing all season navigation (with a substantial impact on CAR’s imports).

Navigation to Bangui is blocked for 5-6 months per year due to rocky sills and decline in the Oubangui level.

95% of the Central African Republic (CAR) imports (c. 270€m per year) transit through the Congo.

Photo courtesy of Jürgen Runge – Cyriaque-Rufin Ngumalet
Land management

Cadastre
- High accuracy, free of charge
- Particularly useful for rural parcels measurements
- Supports land reform programmes and helps solving land disputes

Cartography
- High accuracy, low-cost service
- Hydrographical survey
- Cartography and geographic data collection

Courtesy: South African National Geo-Spatial Information (NGI)
Cost-benefit analysis

Only for aviation, cumulative undiscounted net benefits on a 30 years timeframe (2011-41) will amount to c. €1.7b, vs investments of c. €359m

Total Net Present Value (NPV)*  
~520 €m

* With a 8% discount rate
Potential for regional integration

- 37% of Africa is 250km from an ILS equipped airport
- 87% of Africa is 250km from a main or regional airport

MDGs goal 8.C
Address the special needs of landlocked developing countries and small islands developing states
Widespread political support to satellite navigation in Africa

- Partnership between the European Union and Africa. Connecting Africa and Europe: working towards strengthening transport cooperation
  *COM*(2009)301, June 2009

  *COM*(2010)308, June 2010

- Space for the African citizens
  High-level Meeting under the Belgian EU Presidency, September 2010

- 7th Space Council, Resolution on "Global challenges: taking full benefit of European space systems", Brussels, November 2010

- Declaration of the 4th EU-Africa Business Forum, Tripoli, 27-28 November 2010
EGNOS in Africa

Current activities

Technical definition
Initial infrastructure deployment
Capacity Building

The way forward

Mission requirements and preliminary architecture definition
Infrastructure deployment phase
Exploitation phase

Definition of the governance scheme
Players involved: AUC, ACP secretariat, RECs, Member States, Space agencies, ANSPs, inter-governmental organisations
Conclusions

• Cooperation on space with Africa – aligned with EU policies

• Large potential benefits

• Involvement of wide stakeholders community

• Complexity of governance

• Instruments
Thank you!